

I CLAIM:

1. ~~A woodworking machine comprising:~~
5 an electrically conductive cutter;
a detection system adapted to detect contact between a user and the cutter; and
a brake system adapted to engage and stop the cutter when the detection system
detects contact between the user and the cutter.

10 2. The machine of claim 1, where the detection system is adapted to
capacitively impart an electric signal on the cutter and to detect the occurrence of a determined
change in the signal.

15 3. The machine of claim 1, where the brake system includes a brake pawl
biased to engage at least a portion of the cutter to stop the cutter.

20 4. The machine of claim 3, where the brake system includes a spring
configured to move the brake pawl into the cutter.

5. ~~The machine of claim 3, where the brake system includes a release mechanism adapted to selectively restrain the brake pawl from engaging the cutter until the detection system detects contact between the user and the cutter.~~

5 6. The machine of claim 5, where the release mechanism includes a fuse wire that is melted upon detection of contact between the user and the cutter.

10 7. The machine of claim 1, where at least a portion of the brake system is housed in a replaceable cartridge.

15 8. The machine of claim 1, where the cutter is adapted to move away from the user when the brake system engages the cutter.

20 9. The machine of claim 1, where the detection system is adapted to detect contact between the user and the cutter within 100 microseconds of the user contacting the cutter.

17. ~~The machine of claim 1, where the machine is a band saw.~~

18. A woodworking machine comprising:

5 an electrically conductive cutter;

a detection system adapted to detect contact between a person and the cutter, where the detection system is adapted to capacitively impart an electric signal on the cutter, and to detect the occurrence of a determined change in the electric signal on the cutter; and

10 a reaction system associated with the detection system and the cutter, where the reaction system is adapted to cause a predetermined action to take place relative to the cutter upon detection of contact between the person and the cutter by the detection system.

19. A safety system for machines, ~~the safety system comprising:~~

15 a detection system adapted to detect contact between a person and a working portion of a machine, where the detection system is adapted to capacitively impart an electric charge on the working portion and to detect when that charge drops; and

20 a reaction system associated with the detection system to cause a predetermined action to take place relative to the working portion upon detection of contact between the person and the working portion by the detection system.

~~20. A woodworking machine comprising:~~

a working portion;

a detection system adapted to detect a dangerous condition between a person and the working portion;

5 a reaction system associated with the detection system to cause a predetermined action to take place upon detection of the dangerous condition; and

a control system adapted to control the operability of one or more of the working portion, the detection system and the reaction system.

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